



Patent
92478-8300

17W

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Hiroshi Yahata, et al.

Serial No.: 10/561,087

Filed: December 16, 2005

For: RECORDING MEDIUM, RECORDING
METHOD, REPRODUCTION
APPARATUS AND METHOD AND
COMPUTER-READABLE PROGRAM

Patent Examiner: Not yet assigned

Group Art Unit: 2827

August 22, 2006

Costa Mesa, California 92626

PETITION TO MAKE SPECIAL

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

This Petition to Make Special is being submitted in accordance with 37 CFR §1.102(d) in order to accelerate examination of the above-identified application. Submitted below are items (A) through (E) as required pursuant to MPEP §708.02(VIII):

A. FEE

Submitted with this Petition to Make Special is the fee set forth in 37 CFR §1.17(h).

B. SINGLE INVENTION

In the event that the Office determines that all the claims presented are not obviously directed to a single invention, it is hereby submitted that the Applicants will make an election without traverse as a prerequisite to the grant of special status.

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C. PRE-EXAMINATION SEARCH

A search report issued by a foreign patent office in a corresponding foreign application having claims of similar scope to the claims currently pending in this application has already been made of record. (An English translation is attached hereto.)

D. COPY OF REFERENCE

It is noted that the following reference which has already been made of record and which is cited as a category "A" reference in the foreign search report is deemed most closely related to the subject matter encompassed by the claims:

USPN: 5,854,873 (*Mori et al.*) corresponding to JP 2002-101386A

E. DETAILED DISCUSSION

Provided next is a detailed discussion which points out, with the particularity required by 37 CFR §1.111(b) and (c), how the claimed subject matter is patentable over the *Mori et al.* reference.

The present invention relates to a technique for decoding a video stream and a graphics stream and overlaying the decoded graphics data and decoded video data to produce a combined image.

According to the reproduction of conventional video/graphic overlay techniques, control information and graphics data is read in sequence, the control information is decoded, and then the graphics data is decoded to generate uncompressed graphics since the control information is arranged before graphic data in the graphics stream. The uncompressed graphics is overlaid during a desired presentation timing with the video according to the decoded control information [see specification at page 1 (line 16) – page 2 (line 9)]. While this conventional technique may be adequate for purposes of providing static graphics such as subtitles in a movie requiring

graphic updates in time intervals of 2 to 3 seconds, these time intervals must be shortened if dynamic graphics are to be implemented such as moving graphics requiring a short time of one frame period (1/29.97 sec. for NTSC) [see specification at page 2 (line 18) – page 3 (line 18)].

The present invention is able to achieve shortened time intervals for providing graphic updates. According to one embodiment of the present invention as recited in independent claim 1, a recording medium used for storing data comprises a digital stream generated by multiplexing a video stream and a graphics stream, wherein the graphic stream is a sequence of a plurality of packets which include a packet containing control information, and wherein the control information indicates that graphic data contained in a preceding packet in the sequence is to be displayed at a predetermined time in a state of being overlaid on the video stream.

By providing the control information indicating that graphics is to be displayed using graphic data that precedes the control information, it is possible to achieve an efficient technique for overlaying graphics data onto video data within a short period of time since it is not required to repetitively decode graphics data.

One embodiment of the invention is shown in FIGS. 20-24 which depict a moving graphics as one example of the use of the control information as described above [see FIGS. 20-24 and specification page 40 (line 8) – page 43 (line 11)]. Fig. 22A shows the graphic display of “My heart is fluttering” and FIG. 22B shows the coordinates of the movement of such a graphic display on a display screen. As shown by FIGS. 23 and 24, since the position of the same graphics can be changed merely by using the control information, a graphics update of replacing existing graphics with new graphics can be performed within a short time interval [see specification at page 42 (line 10) – page 43 (line 11)]. Repeating the graphics update in such short intervals makes it possible to realize display control of moving graphics smoothly as the

reproduction of the moving picture progresses. Accordingly, since the graphics display can be updated using only control information within a short time interval, graphics can easily be brought in synchronization with video according to the present invention.

It is submitted that the above-discussed feature of the control information indicating that graphics is to be displayed using graphic data that precedes the control information is also similarly recited in each of remaining independent claims 7 and 13-15 of the present application.

Particularly, independent claim 7 recites a reproduction apparatus wherein upon reading control information in a graphics stream, a graphics decoder displays graphics which has been generated by decoding graphics data that precedes the control information in the graphics stream, based on the control information. Independent claim 13 recites a method of recording wherein the control information indicates that graphics data contained in a preceding packet in a sequence is to be displayed at a predetermined time in a state of being overlaid on the video stream. Independent claim 14 recites a computer-readable program wherein upon reading control information in a graphics stream, graphics which has been generated by decoding graphics data that precedes the control information in the graphics stream is displayed based on the control information. Lastly, independent claim 15 recites a reproducing method, wherein upon reading control information in the graphics stream, graphics is displayed which has been generated by decoding graphics data that precedes the control information in the graphics stream, based on the control information.

It is submitted that the aforementioned features recited in each of independent claims 1, 7 and 13-15, as well as the above described advantages resultant therefrom, are not disclosed or suggested by the Mori et al. reference for at least the following reasons.

The Mori et al. reference cited as a category “A” reference in the foreign search report discloses a multi-media optical disk including a concept of providing multi-angle scene control and parental locked scenes as depicted in FIG. 21 [see column 32 (lines 15-17) and FIG. 21]. The multi-media optical disk contains plural streams of data interleaved in group of picture (GOP) unit data [see abstract]. A video object unit (VOBU) comprises plural group of pictures (GOP) and audio and sub-pictures corresponding to the playback of the group of pictures (GOP) [see column 21 (lines 61-65)]. Each video object unit (VOBU) contains a navigation pack (NV) which is a management data pack containing control data for that video object unit (VOBU) [see column 21 (lines 65-66) and column 23 (lines 6-15)]. Provided next is a greater description of the navigation pack.

The *Mori et al.* reference depicts a detailed view of the structure and contents of the navigation pack (NV) in FIG. 20. As can be seen by FIG. 20, various types of data are contained within the navigation pack (NV) in order to provide the capability of multi-angle scenes and parental control scenes while maintaining seamless playback of multi-media data including audio, video and sub-picture data without intermittent breaks in the data or information [see FIG. 20 and column 20 (lines 59-64)]. For example, the navigation pack contains Seamless playback information (SML_PBI) and Angle information for seamless playback (SML_AGLI). However, the *Mori et al.* reference is not directed towards the objective of shortening a time interval for updating graphic data being overlaid with video data. Thus, while the *Mori et al.* reference discloses various control data contained in the navigation packet (NV) to ensure seamless reproduction, it is submitted that the neither the navigation pack (NV) nor any other description of the *Mori et al.* reference discloses or suggests the implementation of control

information indicating that graphics is to be displayed using graphic data that precedes the control information.

For at least the foregoing reasons, it is submitted that the *Mori et al.* reference fails to disclose or suggest the following features as recited in independent claims 1, 7 and 13-15 of the present application: a recording medium comprising control information indicating that graphic data contained in a preceding packet in a sequence is to be displayed at a predetermined time in a state of being overlaid on a video stream (claim 1); a reproduction apparatus wherein upon reading control information in a graphics stream, a graphics decoder displays graphics which has been generated by decoding graphics data that precedes the control information in the graphics stream, based on the control information (claim 7); a method of recording wherein the control information indicates that a graphics data contained in a preceding packet in a sequence is to be displayed at a predetermined time in a state of being overlaid on the video stream (claim 13); a computer-readable program wherein upon reading control information in a graphics stream, graphics which has been generated by decoding graphics data that precedes the control information in the graphics stream is displayed based on the control information (claim 14); and a reproducing method wherein upon reading control information in the graphics stream, graphics is displayed which has been generated by decoding graphics data that precedes the control information in the graphics stream, based on the control information (claim 15).

CONCLUSION

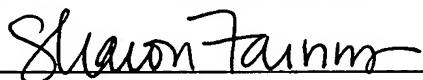
In view of satisfying each of requirements (A) through (E) above, the Examiner is respectfully requested to grant this petition to make special and accelerate examination of this application.

Moreover, it is submitted that the present invention as recited in independent claims 1, 7 and 13-15, as well as the claims dependent thereon, is clearly allowable and the Examiner is kindly requested to promptly pass this case to issuance.

In the event that the Examiner has any comments or suggestion of a nature to expedite prosecution of this application, the Examiner is kindly requested to contact the Applicants undersigned representative.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 22, 2006.

By: Sharon Farnus



Signature

Dated: August 22, 2006

Very truly yours,

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REVISED
VERSION

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/009517

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ H04N5/91, 5/93, G06G5/00, G11B27/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ H04N5/91-5/956, G06G5/00, G11B27/10-27/34

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

| | | | |
|---------------------------|-----------|----------------------------|-----------|
| Jitsuyo Shinan Koho | 1922-1996 | Jitsuyo Shinan Toroku Koho | 1996-2004 |
| Kokai Jitsuyo Shinan Koho | 1971-2004 | Toroku Jitsuyo Shinan Koho | 1994-2004 |

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|--|-----------------------|
| A | JP 2002-101386 A (Matsushita Electric Industrial Co., Ltd), Full text; all drawings & WO 1997/013361 A1 & EP 847195 A1 & US 5854873 A | 1-15 |

Further documents are listed in the continuation of Box C.

See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search
04 October, 2004 (04.10.04)

Date of mailing of the international search report
19 October, 2004 (19.10.04)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Faxsimile No.

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